



# IMAAC

## Interagency Modeling and Atmospheric Assessment Center

### *Real World*

# ***Benzene Release at Petrochemical Depot Deer Park, TX***

29MAR2019 1500Z

***RFI – 19 – 0254zU***

***29MAR2019***

***Requestor: NWS – Houston WFO***

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their contractors for administrative/operational use.

Date: 03/29/2019

Other requests for this document shall be referred to:

Defense Threat Reduction Agency

8725 John J. Kingman Rd, MS 6201

Fort Belvoir, VA 22060-6201



# Request Summary

## • Request Data

- Requestor: Brian Kyle, Lead Forecast Meteorologist, National Weather Service – Houston WFO
- Contact: 1-800-846-1828, sr-hgx.ops@noaa.gov
- Request: Benzene concentration distance circles in Deer Park, TX resulting from the fire which began on March 17.

## • Solution

- Summary: Concentration distance circles are provided, based on a release of 10 ppm at the source region
- Employment: Real World
- Reachback: T. Chekol

Deer Park, TX

**Tank Farm:**

Latitude: 29.732437° N

Longitude: 95.091517° W

**Bayou:**

Latitude: 29.742222 °N

Longitude: 95.10000 °W

**Hazard:**

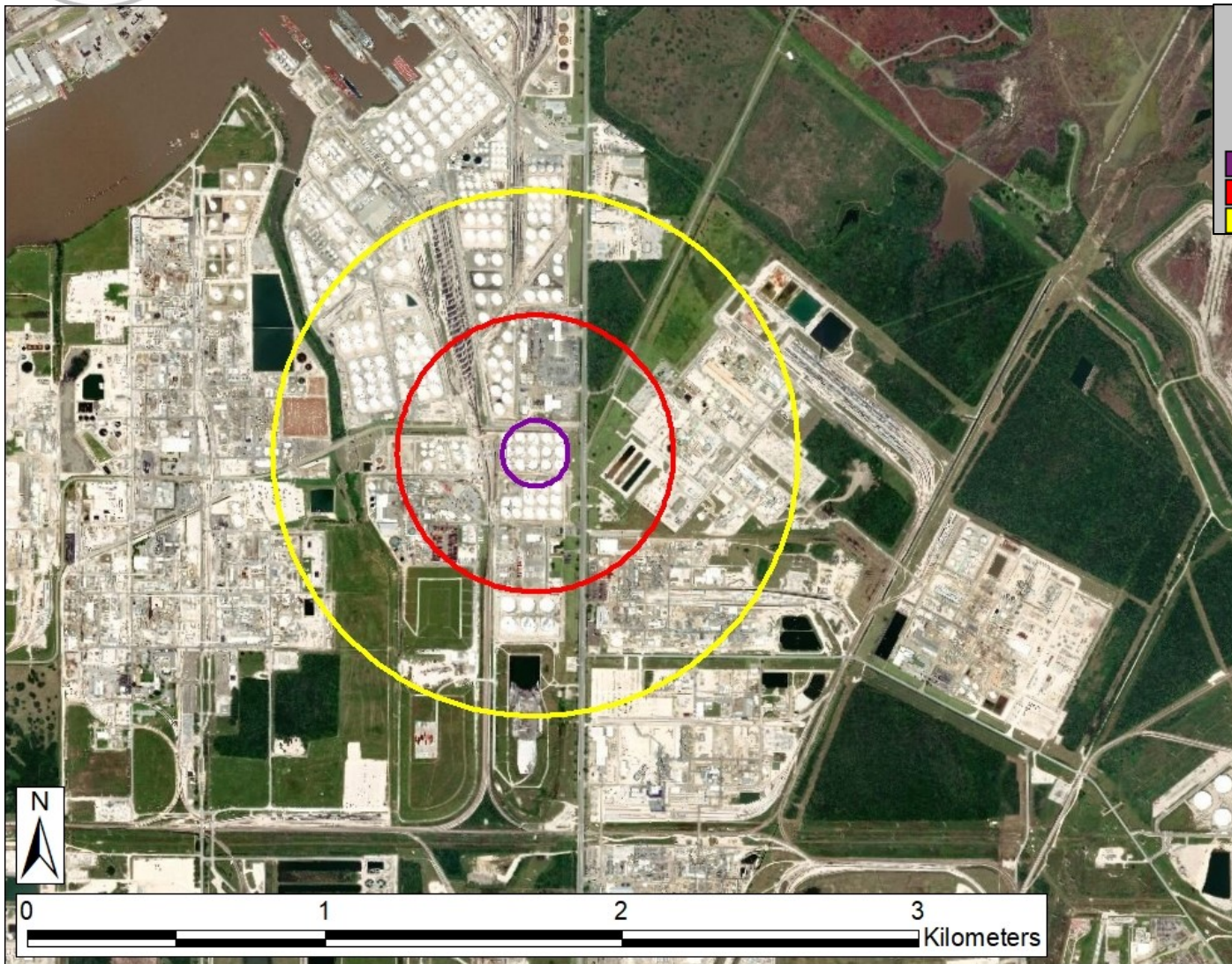
- Benzene concentration circles with a release rate adjusted to give a concentration of 10 ppm near the release.

**Comments:**

- There are no hazardous benzene readings at this time and these concentration circles are provided out of an abundance of caution.



# Benzene Concentration Circles– Tank Farm- 12 Hours



Benzene(Total) Concentration 30-Mar-19 07:00:00Z (12.000 hr)		
	kg/m3	In contour population
10 ppm	3.19E-05	0
1 ppm	3.19E-06	20
0.5 ppm	1.595E-06	52

## FACTS

Deer Park, TX

Location: 29.732437° N / 95.091517° W

Type: Benzene

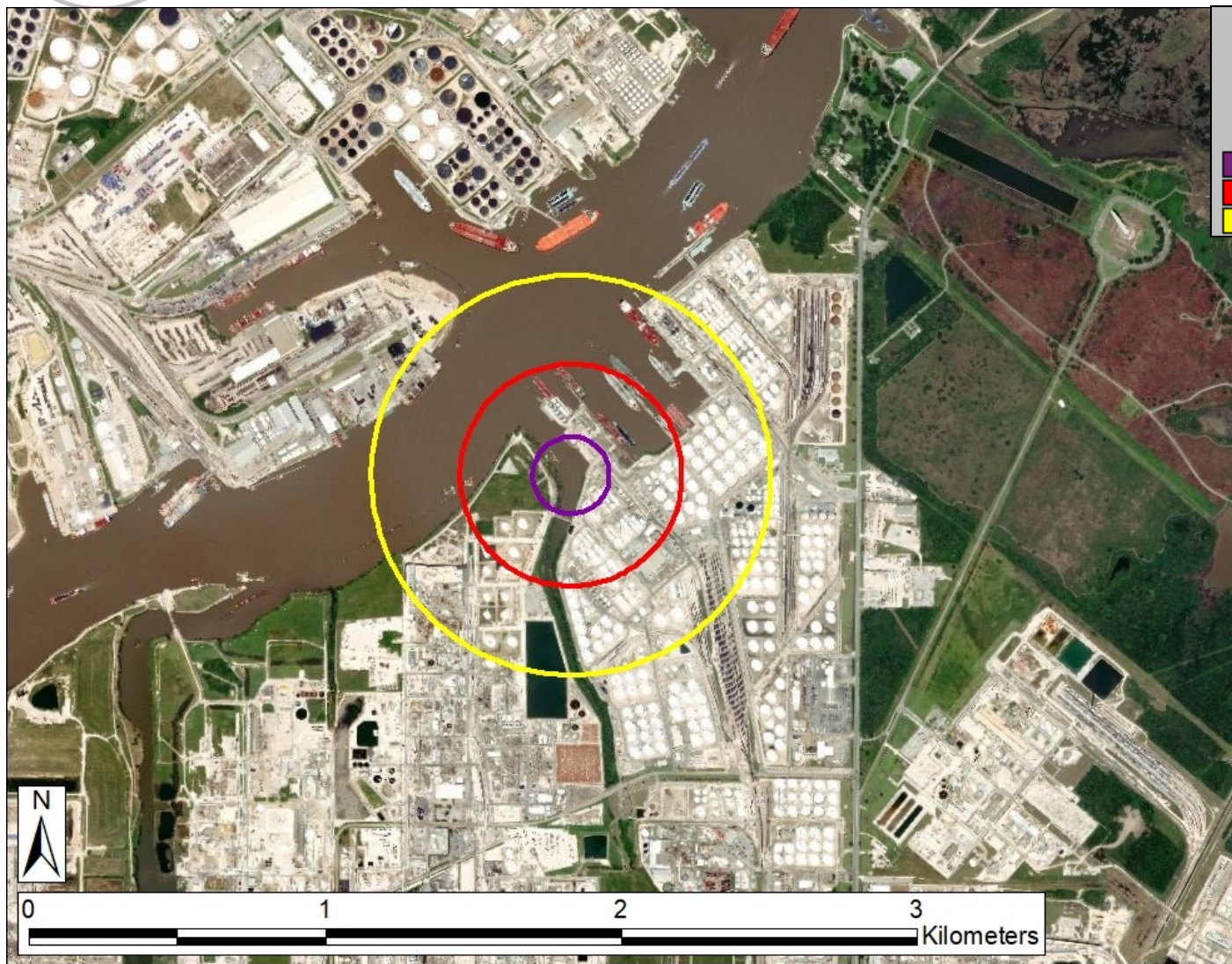
Amount: 10 kg/min

Static Population Estimates:  
LandScan 2017





# Benzene Concentration Circles– Bayou-12 Hours



Benzene(Total) Concentration 30-Mar-19 07:00:00Z (12.000 hr)		
	kg/m3	In contour population
10 ppm	3.19E-05	0
1 ppm	3.19E-06	20
0.5 ppm	1.595E-06	52

## FACTS

Deer Park, TX

Location: 29.732437° N / 95.091517° W

Type: Benzene

Amount: 10 kg/min

Static Population Estimates:  
LandScan 2017